**Landscapes of Intelligence in the Third Reich: Visualising Abwehr Operations during the Second World War**

by

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*Biographical note*
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# Landscapes of Intelligence in the Third Reich: Visualising Abwehr Operations during the Second World War

Claire Hubbard-Hall and Adrian O'Sullivan

**Abstract**

The German military-intelligence service (the Abwehr) was a macrospatial organisation whose clandestine operational activities were significantly affected by such factors as place and space. As the Second World War progressed, the Abwehr's covert spaces expanded and contracted dynamically, producing some challenging operational environments. The service responded in various ways to a changing landscape engendered by military occupation, overseas deployment, geographical distance, enemy activity, and imminent defeat. In response to the recent spatial turn in the theory and methodology of other disciplines, intelligence historians should now consider incorporating geospatial viewpoints more often into their textual accounts and perhaps even publishing dynamic online visualisations with the aid of historical geographic information systems (HGIS).

Key terms: Abwehr; covert space; historical geographic information systems (HGIS); landscape; Nazism; place; Second World War; space; spatial turn.

## Introduction

The Second World War was inherently a spatial conflict characterised by successive phases of violent expansion and contraction, all compressed within the time-frame of a mere six years. In order to optimise operational performance under such volatile circumstances, Allied

and Axis intelligence organisations were forced to adapt and develop their geospatial frameworks very rapidly. The sheer scale and speed of this evolution, together with its global impact on the dynamics of strategic and tactical intelligence acquisition, evaluation, and distribution, present a significant methodological challenge to today's intelligence historians seeking to visualise and analyse clandestine organisations, operations, and personalities in many different theatres during the years 1939-45.

By exploring the significance of geographical location and its influence on the organisation and wartime operations of the German military-intelligence service, the Abwehr,[1] this article will explore a number of geospatial factors such as place and space, and will examine how they affected the nature of clandestine activity in certain locations. The Abwehr is an especially interesting service to investigate because of the conflicted nature of its existence during the Nazi years and the duality of its function in the context of resistance to Nazism and operational failure. Wilhelm Canaris replaced Conrad Patzig — at Patzig's suggestion — as head of the Abwehr (Amtschef) on 1 January 1935. There is strong evidence

1. Part of the Oberkommando der Wehrmacht (High Command of the Armed Forces [OKW]), the Amt Ausland/Abwehr (abbreviated Abw) was one of the two principal German clandestine foreign-intelligence services. The other was the Auslandsnachrichtendienst (SS Foreign Intelligence Service), identifiable as Amt VI (Branch VI) of the Reichssicherheitshauptamt (Reich Security Directorate [RSHA]) (RSHA VI) and commonly referred to (inaccurately) as the Sicherheitsdienst (SS Security Service) or SD, of which it was in fact merely one major constituent, another being Amt IV (Branch IV) of the RSHA (RSHA IV), commonly referred to as the Gestapo (Secret State Police). In mid-1944 the two foreign-intelligence services (Abw and RSHA VI) were merged on Hitler's orders and placed under the overall command of SS Brigadier-General Walter Schellenberg. For a concise overview of Abwehr and RSHA VI organisation, see: Adrian O'Sullivan, *Nazi Secret Warfare in Occupied Persia (Iran): The Failure of the German Intelligence Services, 1939-45* (Basingstoke: Palgrave Macmillan, 2014), 39-42, 44nn18-19, 252-253.

that, as Canaris then set about reorganising the various branches and departments of the Abwehr to function as Germany's sole military-intelligence service while continuing to give public speeches in support of the regime, he had already become convinced that the Nazi leaders were all criminals who would ultimately destroy the German nation. Canaris had come to see his own destiny to be one of self-sacrifice, and, according to one of his branch chiefs, he expected nothing less of his officers.[2] Thus the Abwehr contained within itself a systemic duality: two distinct covert 'landscapes' — one compliant; the other resistant — which may be investigated, differentiated, and potentially visualised, using the specific methods we suggest in this article.

By adapting a geographic filter to the study of the 'missing dimension' more broadly, it becomes possible for historians to 'mine the record' in new and exciting ways, opening up new vistas of future research into the relationship of intelligence organisations and operatives with the physical landscapes of intelligence and how their operational use of covert space

2. See: Michael Mueller, *Canaris: The Life and Death of Hitler's Spymaster* (Annapolis, MD: Naval Institute Press, 2007), 93, 111; Klaus Benzing, *Der Admiral: Leben und Wirken* (Nördlingen: Engelhardt, 1973), 83-91; Bericht des Generalmajor Lahousen, Geheimorganisation Canaris, MSG 1/2812, Bundesarchiv-Militärarchiv, Freiburg im Breisgau (BArch-MArch), available in English translation as Report by Generalmajor Lahousen, Parts I-III, KV 2/173, The National Archives (TNA); and memoirs by former Abwehr officers who served under Canaris in: *Die Nachhut: Informationsorgan für Angehörige der ehemaligen militärischen Abwehr*, MSG 3/667, BArch-MArch. According to Richard Protze (Abw III F), the catalyst for Canaris's disillusion was the Tuchachewski affair of 1937 (see: Ian Colvin, *Chief of Intelligence: Admiral Wilhelm Canaris* [London: Gollancz, 1951], 80; Richard Bassett, *Hitler's Spy Chief: The Wilhelm Canaris Mystery* [London: Cassell, 2005], 141). On the other hand, Heinz Höhne, *Canaris* (New York: Doubleday, 1979), 258, states that the Amtschef's final disengagement from Hitler and the Nazi cause was not triggered until the Blomberg-Fritsch affair of early 1938, which appalled him.

evolved over time, urging intelligence historians to reflect on the meanings associated with the 'centre' and its 'agents'. A review of organisational structure and associated infrastructure, alongside a range of spatial practices, may lead to a greater understanding of secret wartime sites and covert operations. Put more concisely, in the words of John Ferris: 'Progress in the field requires not merely new evidence but new approaches'.[3]

**Landscapes of Intelligence and Geospatial Approaches**

It is therefore hardly surprising that in a relatively new field — intelligence history — Second World War intelligence historians, still partly occupied with writing operational intelligence narratives,[4] have been slow to recognise the merits of a geospatial approach. With 'space and place now firmly on the map'[5] and the 'spatial question' identified by the *Journal of Social History* in 2006 as a key area with regard to the 'future of Social History',[6] it is surely time for intelligence historians to heed the call and consider the merits of such an approach. For example, with the advent of the 'spatial turn' and such new technologies as geographic

3. John Ferris, 'The Road to Bletchley Park: The British Experience with Signals Intelligence, 1892-1945', *Intelligence and National Security* 17, no. 1 (2002): 56. A small number of works have begun to explore the geospatial nature of intelligence. These include: Priya Satia, *Spies in Arabia: The Great War and the Cultural Foundations of Britain's Covert Empire in the Middle East* (Oxford: Oxford University Press, 2008); Andrew Friedman, *Covert Capital: Landscapes of Denial and the Making of U.S. Empire in the Suburbs of Northern Virginia* (Berkeley, CA: University of California 2013).
4. See for example: O'Sullivan, *Nazi Secret Warfare*; Adrian O'Sullivan, *Espionage and Counterintelligence in Occupied Persia (Iran): The Success of the Allied Secret Services, 1941-45* (Basingstoke: Palgrave Macmillan, 2015).
5. Ralph Kingston, 'Mind over Matter?' *Cultural and Social History* 7, no. 1 (2010): 111.
6. Peter Stearns, 'Introduction', *Journal of Social History* 39, no. 3 (2006): 611.

information systems (GIS), it is now possible for historians (and geographers) to begin harvesting key geographic data and creating digital visualisations of the geographies of secret warfare.[7]

However, before scholars can set about capturing the comprehensive locational, spatial, and temporal information needed to construct accurate geohistorical databases according to the best practices of GIS design and management,[8] it is necessary to first mine the archival record and the secondary literature for geographic information. By adopting a historical-geographical approach, it is possible to explore the significance of covert place and space for those who occupied them, showing what associated, extended, and/or projected intelligence spaces they included or were responsible for — and when; and to show the results of a qualitative survey of operational place/space/time that investigates such material and abstract realities as organisation, planning, networks, movements, communications, health, welfare, morale, training, success, failure, and even treachery.

<FIGURE 1 ABOUT HERE (CHH_AOS_Landscapes_JIH_Fig1.tiff)>

Figure 1. Sourcing geolocational data. The first step in creating a gazetteer of Abwehr covert space is to extract data from such rich archival sources as this contemporary Wehrmacht telephone directory for Greater Berlin discovered in the German military archives at RH 14/74, Bundesarchiv-Militärarchiv, Freiburg im Breisgau (BArch-MArch). The comparative

7. A multidisciplinary team of internationally renowned scholars has recently geographically profiled a Gestapo wartime investigation in Berlin to identify the location out of which Otto and Elise Hampel (under surveillance) were operating. See: D. Kim Rossmo et al., 'Geographic Profiling in Nazi Berlin: Fact and Fiction', *Geospatial Intelligence Review* (2014): 54-67.

8. For a definitive overview of HGIS including a comprehensive bibliography, see: Ian N. Gregory and Paul S. Ell, *Historical GIS: Technologies, Methodologies and Scholarship* (Cambridge: Cambridge University Press, 2007). For a much shorter but very helpful contribution, see: Jordi Marti-Henneberg, 'Geographical Information Systems and the Study of History', *Journal of Interdisciplinary History* 42, no. 1 (2011): 1-13.

study of several wartime releases of the directory adds a dynamic temporal dimension to the otherwise static database.

Historians who work on archival intelligence material relating to the organisation and wartime activities of the Abwehr will be all too familiar with the mundane nature of reports and correspondence which comment on geographical location, ranging from station and sub-station addresses to locations of safe houses and dead-drops. Individual case files of failed Abwehr spies compiled by Allied intelligence and security organisations also contain numerous references to key locations. The historian's ability to map such secret activity across several continents and oceans supports the work of Philip Ethington, who asserts that 'knowledge of the past is *literally* cartographic: a mapping of the places of history indexed to the coordinates of spacetime'.[9] Wartime security and intelligence services like MI5, MI6, and the Office of Strategic Services (OSS) already acknowledged the importance of geographical knowledge for determining the accuracy of their intelligence on the Abwehr and the Sicherheitsdienst (SD).[10] At such major interrogation centres as MI5's Camp 020 at Latchmere House in Ham (Richmond-on-Thames, Surrey) and the Combined Services Detailed Interrogation Centre (CSDIC [MEF]) at Maadi (Egypt), much of the information elicited from important enemy prisoners about secret Axis organisation, policy, planning, recruitment, training, and operations was essentially geospatial in nature. The questionnaires

9. Philip J. Ethington, 'Placing the Past: "Groundwork" for a Spatial Theory of History', *Rethinking History* 11, no. 4 (2007): 466. (Our italics).

10. Regarding the significant role played by geographers in the OSS, see: Trevor Barnes and Jeremy Compton, 'Mapping Intelligence: American Geographers and the Office of Strategic Services and GHQ/SC AP (Tokyo)', in *Reconstructing Conflict: Integrating War and Post-war Geographies*, ed. Scott Kirsch and Colin Flint (Burlington, VT: Ashgate, 2011), 227-51.

and other interrogation techniques used were purposefully designed, not just to establish identity or to 'break' prisoners, but also to maximise the acquisition of data on enemy intentions in a global geospatial context.[11] Reports compiled by H.R. Trevor-Roper of Section Vw of MI6[12] during the period 1942-1943 fastidiously note details concerning sources and destinations of German operational intelligence, W/T station locations, courier systems,[13] and prominent features within the landscape that offered key strategic vantage points, such as the 'Balkan Watch-Tower', which in 1942 played an important role in assisting the planned but never realised Caucasus-Nile pincer movement through espionage and fifth-column work.[14] By means of such cartographic texts, the historian can explore the

11. For more about MI5's interrogation centres and techniques, see: Oliver Hoare, ed., *Camp 020: MI5 and the Nazi Spies: The Official History of MI5's Wartime Interrogation Centre* (Richmond: PRO, 2000).
12. The Radio Security Service (RSS), located in Barnet, intercepted enemy W/T messages and passed them to Bletchley Park for deciphering. Section V of MI6 therefore established a Barnet subsection (Vw) under the brilliant Hugh Trevor-Roper to extract, interpret, and process the deciphered messages. His subsection ultimately became an independent organisation, the Radio Intelligence Service (RIS). See: Tim Milne, *Kim Philby: A Story of Friendship and Betrayal* (London: Biteback, 2014), 100-101.
13. On 5 April 1941 Rene Mezenen, a steward aboard the Pan-Am Clipper flight between New York and Lisbon was arrested. Mezenen also worked as a courier for the Abwehr. See: Raymond J. Batvinis, *The Origins of FBI Counterintelligence* (Lawrence, KS: University Press of Kansas, 2007), 250.
14. Reports on the Abwehr and Sicherheitsdienst covering the period 1943-44, compiled by Captain H.R. Trevor-Roper, head of RIS (Radio Intelligence Service), HW19/347, TNA. For an American example see: Trevor J. Barnes, 'Geographical Intelligence: American Geographers and Research and Analysis in the Office of Strategic Services 1941–1945', *Journal of Historical Geography* 32, no. 1 (2006): 149-168. The best textual exposition of the Caucasus-Nile pincer movement is to be found in Klaus-Michael Mallmann and Martin Cüppers, *Halbmond und Hakenkreuz: Das Dritte Reich, die Araber und Palästina* (Darmstadt: WBG, 2007), 89-104. For a strategic map of the pincer movement, see Figure 6.

significance of geographical location for German wartime intelligence operations and the nature of covert space born out of the operative's use of the 'secret front'.[15]

Interestingly, historians researching Abwehr organisation and operations have long noted the significance of geographic location. For example, in his seminal study of the Abwehr, David Kahn provides a map of Berlin which denotes the locations of the headquarters of the main Third Reich intelligence agencies, as well as inset maps showing the suburban residences of Heydrich and Canaris, and the urban and suburban locations of various Abwehr and clandestine SS units. At the same time, Kahn alerts the reader to the fact that all the HQs were located 'at or near the Bendlerstrasse or Führer headquarters'.[16] Kahn emphasises the central location of the various intelligence headquarters within the covert capital of Berlin and alludes throughout his definitive monograph to the operational significance of geographic location. However, in some instances, Kahn came into conflict with other historians writing at the same time, who, though seldom concerned with geographic data themselves, nevertheless pointed out certain errors in Kahn's geographical observations concerning Abwehr operations in South America.[17]

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15. See the work of Henri LeFebvre, who argues that *place* is a social construction produced by social agency: Henri LeFebvre, *The Production of Space* (Oxford: Blackwell, 1991).

16. David Kahn, *Hitler's Spies: German Military Intelligence in World War II* (New York: Da Capo Press, 1978), 48-50. The Bendlerstrasse is directly adjacent to (and synonymous with) the Tirpitzufer (Abwehr HQ).

17. Stanley E. Hilton, *Hitler's Secret War in South America 1939-1945: German Military Espionage and Allied Counter Espionage in Brazil* (Baton Rouge, LA: Louisiana State University Press, 1999). (Originally published in Portuguese in December 1977).

For instance, Kahn, whose work focuses largely on Europe and the northern United States, argues that the Abwehr had its 'most extensive and elaborate organisation'[18] in Argentina. However, in a meticulous study of German military espionage and allied counterespionage in Brazil, Stanley Hilton asserts that 'at least until 1942, the major effort in German military intelligence was, in fact, made in Brazil'.[19] This was due to a number of important geospatial factors, from Brazil's central location on enemy convoy routes, convenience for clandestine communications, and pre-existing sizeable German community, to the fact that Brazil was a major provider to the Third Reich of such vital commodities as cotton, coffee, and rubber. Following the work of Kahn and Hilton in the 1970s, it took 20 years for any empirical research to emerge that featured geographical case studies of Abwehr operations.[20] However, in the new century a renewed interest has developed in the geography of war,[21] alongside spatial aspects of Nazi Germany[22] more broadly. Combined with the

18. Kahn, *Hitler's Spies*, 317.

19. Hilton, *Hitler's Secret War*, 4.

20. See: Ralph Erskine, 'Eavesdropping on "Bodden": ISOS v. the Abwehr in the Straits of Gibraltar', *Intelligence and National Security* 12, no. 3 (1997): 110-129; Norman J.W. Goda, 'The Riddle of the Rock: A Reassessment of German Motives for the Capture of Gibraltar in the Second World War', *Journal of Contemporary History* 28, no. 2 (1993): 297-314; David J. Alvarez, 'Vatican Intelligence Capabilities in the Second World War', *Intelligence and National Security* 6, no. 3 (1991): 593-607.

21. See: Colin Flint, ed., *The Geography of War and Peace: From Death Camps to Diplomats* (Oxford: Oxford University Press, 2005).

22. See: Paolo Giaccaria and Claudia Minca, eds., *Hitler's Geographies: The Spatialities of the Third Reich* (Chicago: University of Chicago Press, 2016); Claus-Christian W. Szejmann and Mailken Umbach, eds., *Heimat, Region and Empire: Spatial Identities under National Socialism* (Basingstoke: Palgrave Macmillan, 2012).

continuous drip-feed of released batches of UK and US archival intelligence files, a greater number of regional wartime military-intelligence studies has appeared in recent years,[23] some of which address Abwehr activity in various geographical areas.[24]

In many ways, however commendable, this recent interest in regional intelligence activities has led historians to neglect the bigger picture. More than 20 years ago, Gerhard Weinberg argued that 'too many of the existing accounts treat the war either from quite parochial perspectives or by dealing with different geographical areas as if one were an appendage of another', placing emphasis on the point that 'dramatic events were taking place simultaneously in different parts of the globe'.[25] Very few scholars have risen to the

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23. See: David A. Messenger, "'Against the Grain": Special Operations Executive in Spain, 1941–45', *Intelligence and National Security* 20, no. 1 (2005): 173-190; Panagiotis Dimitrakis, 'The Special Operations Executive and Cyprus in the Second World War', *Middle Eastern Studies* 45, no. 2 (2009): 315-328; Kent Fedorowich, 'German Espionage and British Counter-intelligence in South Africa and Mozambique, 1939–1944', *Historical Journal* 48, no. 1 (2005): 209-230.

24. See: Magnus Pahl, *Hitler's Fremde Heere Ost: German Military Intelligence on the Eastern Front 1942-45* (Solihull: Pelion, 2016); Mark M. Hull, 'The Irish Interlude: German Intelligence in Ireland, 1939-1943', *Journal of Military Histor*y 66, no. 3 (2002): 695-717; Bernard Wasserstein, *Secret War in Shanghai: Treachery, Subversion and Collaboration in the Second World War* (London: IB Tauris, 2017); Suleyman Seydi, 'Intelligence and Counter-Intelligence Activities in Iran during the Second World War', *Middle Eastern Studies* 46, no. 5 (2010): 733-752; Michael Dobbs, *Saboteurs: The Nazi Raid on America* (New York: Vintage, 2007); Jonathan Best, 'Spying on the Rock: An Assessment of Abwehr Clandestine Operations against Gibraltar during the Second World War', *Journal of Intelligence and National Security* 34, no. 2 (2019): 243-262; Robert Hutchinson, *German Foreign Intelligence from Hitler's War to the Cold War: Flawed Assumptions and Faulty Analysis* (Kansas: University Press of Kansas, 2019).

25. Gerhard L. Weinberg, *A World at Arms: A Global History of World War II* (Cambridge: Cambridge University Press, 1994), xiv.

challenge to produce a 'grand narrative' of Second World War intelligence history,[26] let alone an all-encompassing geographical study of German intelligence operations.[27] The significance of geographical location for German military-intelligence operations during the Nazi period has yet to be fully explored, though the factors of physical and metaphysical space undoubtedly influenced the performance of German intelligence organisations and their operatives, both in the field and at headquarters. Thus the survey that follows of Abwehr places and spaces is interspersed with examples of activities that were somehow dynamically conditioned and characterised by various interactions between operational locations and the covert spaces inhabited by operatives. Though far from being a grand narrative or a comprehensive study in itself, it is to be hoped that this attempt at an overview may resonate with those intelligence historians who seek 'to introduce a geographical approach into the most recent debates on the cultural histories of the Third Reich',[28] by providing a more comprehensive study of geospatial factors in German secret warfare.

**Visualising Abwehr Operations**

<FIGURE 2 ABOUT HERE (CHH_AOS_Landscapes_JIH_Fig2.tiff)>

26. For a recent attempt, see: Max Hastings, *The Secret War: Spies, Codes and Guerrillas 1939-45* (London: Collins, 2015). While Hastings adequately describes some Second World War secrets for the general reader, his book is not a detailed scholarly account.
27. For a scholarly review of German works on the Second World War, see: Ulrich Schlie, 'Today's View of the Third Reich and the Second World War in German Historiographical Discourse', *Historical Journal* 43, no. 2 (2000): 543-564. At the time of writing, Schlie pointed out that there was an enormous interest in German opposition to Hitler; however, like many Second World War historians, he makes no mention of German works that deal with intelligence and its role in determining Nazi policy and operational decisions.
28. Giaccaria and Minca, *Hitler's Geographies*, 2.

Figure 2. Static hierarchical visualisation (organisation chart) of the Abwehr landscape ca. 1942-1943 (greatly simplified), derived mostly from diverse archival sources, including RH 14/74, BArch-MArch; HW 19/347, WO 208/5272, and numerous interrogation files in the KV series, The National Archives, Kew (TNA). Names of officers (e.g. KUEBART) indicate the locations within the Abwehr landscape of certain personnel mentioned in this article. However, in an already crowded chart there is no room for the inclusion of any more specific geospatial or other data. With GIS, on the other hand, such hidden data (and much more) could be accessed and displayed interactively in pop-up windows.

### *Within the Third Reich*

The Abwehr was a macrospatial organisation (see Figure 2) whose clandestine operational activities were significantly affected by such factors as place and space. Its name reflects a defensive concept necessitated by post-Versailles constitutional strictures and is best understood through the metaphor of the defensive musk-ox circle (see Figure 3):[29] outward-looking but based on a German or European focal point, each Abwehr station would dispatch its agents to selected territories and regions across the world, as far afield as South America, South Africa, and China. While the Abwehr had a central HQ with a centralised administrative branch (Abwehr Z),[30] first in Berlin (on the Tirpitzufer) and later near Zossen, a small garrison town about 40 km south of Berlin, it could never be described as a centralised organisation because under Canaris's leadership it exercised no central control over its widely dispersed stations, each of which was encouraged to operate independently of the others and to develop its own set of special intelligence interests, often inspired by

29. See Peter C. Lent, 'Ovibos moschatus', *Mammalian Species* 302 (15 January 1988), 6.

30. See Figure 2. In addition to Abwehr Z (administration), the Abwehr was organised in three main branches: Abwehr I (intelligence [not unlike MI6]), Abwehr II (sabotage and subversion [not unlike SOE]), and Abwehr III (counterintelligence [not unlike MI5]), as well as the Amtsgruppe Ausland, which controlled the activities of German military attachés abroad.

individual station chiefs. Thus Hamburg station (AST Hamburg) developed the widest range of intelligence targets on several continents and demonstrated a special interest in the English-speaking world, whereas Vienna station (AST Wien) specialised in the Balkans, Turkey, and the Middle East. Most coastal stations specialised in naval intelligence, whereas those located in or near manufacturing areas tended to concentrate on economic intelligence. Individual Abwehr intelligence officers (IOs) and agents (*V-Leute*) operated, often autonomously or semi-autonomously, in as wide a range of physical and social environments as one could possibly imagine — hostile or benign; domestic or foreign; temperate or tropical; urban, suburban, or rural — especially given the global reach of the Abwehr organisation itself. The choice of locations (places) to which IOs and agents were assigned was generally determined not by whim or fancy, but strictly according to operational targets and parameters. Unfortunately, however, as in the case of Operation PASTORIUS[31] or Operation FRANZ,[32] such practical efficiency and attention to detail at the planning stage

31. See: H.L. Trefousse, 'Failure of German Intelligence in the United States, 1935-1945', *The Mississippi Valley Historical Review* 42, no. 1 (1955): 84-100; Thomas H. Etzold, 'The Futility Factor: German Information Gathering in the United States, 1933-1941', *Military Affairs* 39, no. 2 (1975): 77-82. Operation PASTORIUS was a covert sabotage mission that failed when two of the six-man team surrendered to the FBI. In June 1942 they landed on Long Island and one of the agents spoke German in front of an American coastguard who alerted the authorities.

32. Operation FRANZ was a joint Abwehr/RSHA VI parachute expedition to Persia (Iran) in March 1943 which achieved nothing operationally and ended by the end of August, after the typhoid death of one parachutist, in the capture of the remaining five operatives. For more about this and many other Abwehr *Ferneinsätze* (long-range operations) that failed, not least because operatives became autonomous from the moment they entered the field (operational space), see: O'Sullivan, *Nazi Secret Warfare*, 167-180, 224-226.

was not necessarily matched by the technical, cultural, and linguistic training needed to prepare field personnel for success in challenging operational environments (spaces).[33] The extent to which the systemic decentralisation and disorganisation that characterised the musk-ox paradigm may have been deliberately contrived by Canaris and Oster to sabotage Nazi policy remains debatable. However, by using geospatial data extracted from archival records and secondary literature to generate focussed HGIS visualisations of intelligence dysfunction, scholars might perhaps be better able to clarify key issues concerning the diverse regional tasking priorities established by individual Abwehr stations and the ways in which they conflicted or overlapped with those of other formations, such as the war organisations (KOs) for example, not to mention the SS. By inducing qualititative conclusions about operational (in)efficiency from specific quantitative geodata, it should be possible to identify some cogent reasons for the astonishingly high failure rates of Abwehr operations in all theatres and at every stage of the Second World War. At the same time, we may also dispense once and for all with the notional polarisation of quantitative versus qualitative research, for with historical geoinformatics there is no binary choice. The acquisiton of quantitative data about the geography of the Abwehr is the prerequisite for the qualitative analysis of the Abwehr's use of space on a global scale.

<FIGURE 3 ABOUT HERE (CHH_AOS_Landscapes_JIH_Fig3.tiff)>

Figure 3. The paradigm of the defensive musk-ox circle. Static nonhierarchical visualisation of a few selected Abwehr stations and war organisations ca. 1942-43 (greatly simplified), which clearly shows the lack of centralisation and the relative autonomy of individual posts, especially in their choice of operational target regions. The application of such GIS

33. For a discussion of the role of geography in warfare see: John Keegan, *A History of Warfare* (New York: Knopf, 1993). Keegan stresses that geography is important on the battlefield and at the operational level too.

techniques as layering, popup windows, and breakout polygons to such a haphazard landscape would permit the inclusion of all 34 stations, 26 substations, 24 outstations, 10 war organisations, and other Abwehr formations, together with a wealth of key information about relationships among them, which would serve to clarify an otherwise confusing picture.

Within the Third Reich, in accordance with severe post-Versailles restrictions placed by the German defence ministry on its newly-formed intelligence department, the Reichswehr-era Abwehr had no say in the locations selected for its domestic stations, for the service was required to maintain a station (*Abwehrstelle* or AST) at the headquarters of each of the (originally seven) military districts (*Wehrkreise*), all located in major urban centres throughout the country. As time went by and the number of military districts increased, some of the bigger ASTs acquired substations (*Abwehrnebenstellen* or NESTs), but these too were located in large regional centres. So it came about that the Abwehr never used — and presumably never had the opportunity to consider using — rural or remote areas for operations at the station, substation, or even outstation (*Abwehraussenstelle* or AUST) level, though a certain degree of seclusion seems to have been deemed desirable when choosing premises within urban or suburban areas. In Hamburg, for instance, the Abwehr station was housed in a quiet residential neighbourhood at the end of a cul-de-sac, where the comings and goings of personnel and agents could not be scrutinised.[34]

Only Abwehr Ii (radio communications) and Abwehr II (sabotage, subversion, and special operations) chose rural locations for their operations and training. Besides the AST Berlin radio station (SCHLOSS) in suburban Stahnsdorf and (from 1942 onwards) the main transmitting-receiving station (BURG) at Belzig (about 90 km SW of Berlin), Abwehr Ii had numerous W/T stations in or near small villages throughout the Reich, in remote or quiet

34. See: Kahn, *Hitler's Spies*, 239.

spaces as far as possible from electrical installations that might cause static interference. Isolated villas were the preferred form of accommodation, especially those with extensive grounds where large transmitting and receiving aerials could be installed and concealed.[35] For very different reasons, Abwehr II maintained its sabotage-training establishments in quiet rural spaces: at the Quenz estate in Brandenburg and at Camp Regenwurm, Meseritz (Miedzyrzecz), in what is now rural western Poland.[36] The main reasons for their choices were (1) the need for extensive open spaces, including firing ranges and bodies of water for land and marine exercises, (2) the availability of large buildings to accommodate significant numbers of trainees, (3) the ability to store explosives safely and far from densely populated spaces (Quenz even had an explosives laboratory),[37] (4) the ability to discharge weapons and detonate explosive charges at all times of day and night without alarming the local civilian population, and finally (5) the universal desire to evade scrutiny. Similarly, in premises rented from the German Labour Front (Deutsche Arbeitsfront [DAF]), Abwehr II also maintained a remote high-altitude training centre at Bodental in the Carinthian Alps, where

35. An astonishing abundance of geospatial information on Abw Ii (Geheimer Funkmeldedienst) and the Abwehr in general is to be found in Rudolf F. Staritz's (sadly unpublished) manuscript, 'Abwehrfunk—Funkabwehr: Technik und Verfahren der Spionagefunkdienste' (1985), which may be downloaded from the Foundation for German Communication and Related Technologies website at www.cdvandt.org. Rudi Staritz, a former Abwehr W/T operator/trainer and (postwar) distinguished telecommunications engineer, is widely regarded as the foremost authority on German clandestine radio organisation and operations during the Second World War.
36. Until it was destroyed in an air raid, probably in mid-1943, sabotage training was also provided in a former chemicals factory surrounded by pine woods at Berlin-Tegel. Camp 020 report, 18 January 1945, KV 2/752, TNA.
37. Mueller, *Canaris*, 174.

selected personnel were able to prepare in an atmosphere of extreme asceticism for long-range deployment (*Ferneinsatz*) to the challenging Middle East tribal region of Kurdistan.[38]

Yet, in the very heart of Berlin just south of the Tiergarten at Tirpitzufer 72-80, on the north embankment of the Landwehr Canal (now known as the Reichpietschufer), was the Abwehr HQ itself – a building whose architecture promoted privacy and secrecy – a topsy-turvy old warren of uncomfortable offices, labyrinthine corridors, innumerable staircases, and a splendid Classical facade that also concealed behind it the offices of the German Admiralty (Oberkommando der Marine [OKW]) and the German Armed Forces cipher branch (OKW/Chi).[39] For many, in an age long before the invention of internet teleconferencing, Abwehr HQ became an obligatory destination for those summoned to important meetings from domestic and European stations or even from the far reaches of Hitler's domain. Thither they travelled by road, rail, and air — from Vienna, Prague, and Paris; from the Russian front; from the Atlantic Wall and Mediterranean shores; from Scandinavia and the Balkans; even from as far away as North Africa and Turkey — in order to attend planning conferences and executive meetings at the Tirpitzufer or at Zossen, no matter how inconvenient or disruptive their journeys, and no matter how difficult or hazardous they became in wartime. Sometimes, of course, this process was reversed: staff officers would often depart from the central Berlin hub for distant outstations, most notably Wilhelm Canaris himself, who

38. First detailed interrogation report on Mueller, Agt by Major Edmund Tilley, E23 Unternehmen MAMMUT, 27 October 1943, WO 201/1402B, TNA.

39. For a comprehensive overview of Abwehr organisation and a detailed list of Abwehr staff located at the Tirpitzufer and other Berlin sites, see a perfectly preserved series of top-secret Wehrmacht telephone directories for Greater Berlin at RH 14/74, BArch-MArch: a priceless trove of geohistorical data (Figure 1).

travelled widely and developed a particular fondness for Spain, which he visited as often as he could.[40] Nothing, however, can have matched the logistical nightmare caused in May 1944 when Keitel and Himmler summoned some 700 Abwehr and SD staff officers to Salzburg in the far south of the Reich for a two-day conference on the merger of the two services. One can only conjecture that Berlin must have been considered too risky a venue in which to convene so many of the top intelligence 'brass' because of the round-the-clock threat of Allied air raids.[41]

<FIGURE 4 ABOUT HERE (CHH_AOS_Landscapes_JIH_Fig4.tiff)>

Figure 4. Contemporary visualisation of Abwehr HQ (Maybach I/II complex) at Camp Wünsdorf, near Zossen, as sketched from memory by Major Gottfried Müller of Abwehr II while under interrogation at Camp 020 as a POW. Imagine the wealth of additional data that could be stored and accessed if this unique artefact were used interactively as a GIS basemap with markers and user controls. Source: WO 201/1402B, TNA. For an accurate modern version which partially confirms the reliability of Müller's memory, cf. Hans-Albert Hoffmann, *Bücher- und Bunkerstadt Wünsdorf: Die Bunkeranlagen* (Wünsdorf: Bücherstadt Tourismus, n.d.), 8.

To escape the relentless Allied bombing, the Abwehr had relocated in April 1943 to the heavily fortified and elaborately (if ineffectively) camouflaged former field headquarters of the Oberkommando des Heeres (High Command of the Army [OKH]) at Wünsdorf near Zossen, where they occupied five of 12 massive, bomb-proof bunkers built to resemble

40. Rumour has it that Canaris had a Spanish mistress (some even say a gay lover); however, evidence suggests to the contrary that the Admiral's frequent trips to the Iberian peninsula had more to do with his top-priority Operation BODDEN and the vital significance of Algeciras and Gibraltar for German strategic naval intelligence.

41. See: Kahn, *Hitler's Spies*, 269.

farmhouses (see Figure 5). Actually, such faux-rurality fooled no one, for the bunker-houses of uniform size and shape were arranged in such a regular configuration that Allied aerial reconnaissance could hardly have mistaken the Wünsdorf military camp for a rural village. Though today's visitor will find the partly-demolished ruins nestled in a secluded pine forest, the trees were mere four-year-old saplings in 1943 and offered no protection at all from the air. However, more important to the prewar military planners and architects was the question of security on the ground, achieved by fortification and isolation: the Maybach I complex was deemed impregnable. Surrounded by five flak towers, concrete pillboxes, barbed wire, and sentries, no one was permitted to approach the Abwehr space without a *Sonderausweis* (special pass).[42]

There exists interesting anecdotal evidence about the inconvenience caused by locating intelligence units in secluded non-urban spaces, whether for safety or security reasons. Werner Eisenberg, who headed the Turkey, Iraq, Syria, and Palestine desk for Abwehr II Orient (Abw II OR), not only continued to practise law and to run his various Berlin businesses after joining the Abwehr, but as a reserve army officer he was also required to serve periodically as OKH duty officer at Zossen. Apparently, this interfered greatly with his routine and frequently prevented him from dealing with urgent matters promptly. It would often happen, for instance, that Eisenberg's mail was forwarded from the Tirpitzufer to Zossen, just after he had left Maybach I and was on his way back to Berlin. While Eisenberg's distress was arguably self-inflicted, one can nevertheless see it as an example of how a sophisticated, urbane military officer (and many Abwehr officers were just that) based in the capital might have chafed at the time wasted getting to and from remote rural locations

42. See: Hans-Albert Hoffmann, *Bücher- und Bunkerstadt Wünsdorf: Die Bunkeranlagen* (Wünsdorf: Bücherstadt Tourismus, n.d.), 6-18.

like Wünsdorf.[43] Far from being able to call for a staff car and driver whenever they wished, these busy men had to depend on an infrequent Abwehr shuttle-bus service between Berlin and the Wünsdorf camp, with one of them acting as 'postman' for the interdepartmental mail and even as 'conductor' to expedite security checks when the bus reached the camp entrance. It was a tedious, time-wasting process, but nothing like the daunting journey that faced any Abwehr officer required to attend meetings at OKH's new HQ in East Prussia from early 1943 onwards.

In March 1943 for instance, Gottfried Müller, an Abwehr II officer who needed a certain experienced Fremde Heere Ost (Foreign Armies East [FHO]) administrative officer, Wilhelm Kuebart, to help him plan a Middle East operation, had great difficulty reaching Kuebart at the new OKH HQ (Camp FRITZ) deep in the Mauerwald Forest near Angerburg (Wegorzewo),[44] not far from Hitler's Rastenburg HQ in what is now north-eastern Poland. Visitors were not allowed to stay for the night at the camp; they therefore had to take the overnight train from Berlin, not arriving in Angerburg until 10.30 am, followed by a 30-minute bus ride to the camp, meaning that no meetings could be scheduled to commence until 11.00 am at the earliest, and that the elaborate return to Berlin had to be begun in the late afternoon. For each meeting day this process had to be repeated. For officers travelling to OKH HQ from further afield, this was indeed a formidable odyssey. When Müller finally

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43. First detailed interrogation report on Mueller, Agt by Major Edmund Tilley, C7(d)(ii) Abw II/OR, 27 October 1943, WO 201/1402B, TNA. See also: O'Sullivan, *Nazi Secret Warfare*, 53.

44. Misleadingly transliterated in the MI5 records as 'Annaberg'. Ibid., C14(c) Generalstab Fremde Heere/Ost (General Staff Foreign Armies/East [FHO]), 27 October 1943, WO 201/1402B, TNA. For accurate locational data on the remote camps surrounding Hitler's *Wolfsschanze*, see Staritz, 'Abwehrfunk—Funkabwehr', 28.

arrived at Camp FRITZ, he was greeted with extraordinarily tight security: despite his identification as an active-service Abwehr officer, he had to be accompanied by an armed guard wherever he went. After several planning meetings with Kuebart, it ultimately turned out that, after Müller had travelled all the way from Berlin more than once, the intelligence materials that he really needed, including a large collection of photographs, had been left behind inadvertently by Kuebart at Zossen![45]

<FIGURE 5 ABOUT HERE (CHH_AOS_Landscapes_JIH_Fig5.jpg)>

Figure 5. One of the Maybach I bunker-houses (Haus A 2, formerly occupied by Fremde Heere West [Foreign Armies West (FHW)]) at Wünsdorf, near Zossen. Demolition was attempted in 1947-1948 by Soviet engineers, but was only partially successful. Photographed by the authors in 2009.

Notwithstanding the inconvenience of directing intelligence operations from such remote rural locations, the evacuation of the Abwehr from the Tiergarten district proved to be a wise move, for the Wünsdorf camp was only ever bombed three times, not until the war was nearly over. The heaviest raid was on 15 March 1945, when 584 American bombers carried out a massive sortie, dropping more than 4,700 high-explosive bombs on the camp, though only very few fell on the Maybach I complex. Not a single bunker-house (see Figure 5) was directly hit or seriously damaged, but the surrounding wooden barracks were mostly flattened and over 100 lives were lost. The message from the Allies was clear; OKH immediately began evacuation to the Alps, though it was a complicated logistical process. Consequently, the last OKH HQ troops did not finally move out of the Maybach I complex

45. Ibid., C14 Organizations occasionally collaborating with Abw missions, 27 October 1943, WO 201/1402B, TNA.

until 20 April 1945, splitting up into two groups and heading north for Flensburg or south for Berchtesgaden. It was a close shave: less than 24 hours later, the Red Army took Zossen.[46]

***Abroad***

Beyond Germany, the Abwehr sought to acquire foreign intelligence via three different types of operational channels: (1) through the military attachés posted to German embassies in countries with which Germany was not at war, (2) through so-called 'war organisations' established in neutral countries, and (3) through the military districts set up in occupied countries. Throughout the war, under Leopold Bürkner and in cooperation with Ribbentrop's foreign diplomatic service, the Abwehr administered a virtually autonomous foreign-service department (Amtsgruppe Ausland), which supplied German embassies and legations located in foreign capitals with military, air-force, and naval attachés responsible for collecting intelligence by open and licit means. However, for neutral countries (e.g. Switzerland, Sweden, Finland, Spain, Portugal, Bulgaria, and Turkey) the unique concept of the covert *Kriegsorganisation* (war organisation [KO]) was devised, which substantially mimicked the AST in structure and function. Being free from diplomatic protocol, a KO could be located in either a neutral capital like Stockholm or Lisbon or in a major neutral urban centre like Istanbul, where intelligence activity was far more intense than in the Turkish capital, Ankara. If a city was a known hotbed of international espionage, then it only made sense for the Abwehr to station its operational officers there rather than in the capital. The concept of the autonomous KO served this end brilliantly.

As a creature of the Abwehr's invention, it was infinitely adaptable, devoid of the rigid protocols that hampered or severely chastened the behaviour of Abwehr officers under

46. Hoffmann, *Bunkeranlagen*, 16.

embassy cover. In Turkey the solution was to locate the Kriegsorganisation Nahost (KONO) subsidiary operational base in Istanbul, under the command of Paul Leverkuehn with consular cover, while the nominal head of station, Meyer-Zermatt, remained under diplomatic cover at the Ankara embassy more or less in a liaison capacity, dealing with the intelligent and generally supportive ambassador, Franz von Papen.[47] In neutral Persia, with Russian forces just across the border in Soviet Azerbaijan, the Abwehr located their shortlived KO Iran (KOI) not in Tehran but close to the Soviet border in the relatively small city of Tabriz in Persian Azerbaijan, which had a population of only 213,000 according to a census taken one year before KOI was established in May 1941.[48] The Abw I L (air intelligence) officer in charge of KOI was provided with consular cover, as was typical for many (but not all) KO personnel.[49] While not attached to embassies, legations, or consulates as 'legal' military attachés, KO officers usually operated as 'illegals' under some other kind of diplomatic or commercial cover and usually from offices in buildings with diplomatic protection. This system worked well enough early in the war when many KO outstations were one-man operations. However, as KO staffs increased exponentially, friction arose, first with the real German diplomats who discovered that cuckoos' eggs had been laid in their nests, and then with the host countries, most of which found themselves under increasing pressure to side with the Allies and eject the Germans, many of whom — especially towards the war's end — had not been provided with diplomatic immunity.

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47. Paul Leverkuehn, *German Military Intelligence* (London: Weidenfeld and Nicolson, 1954), 11; Mallmann and Cüppers, *Halbmond und Hakenkreuz*, 94.

48. Mohammad Gholi Majd, *August 1941: The Anglo-Russian Occupation of Iran and Change of Shahs* (Lanham, MD: University Press of America, 2012), 27-28.

49. For more about KOI, see: O'Sullivan, *Nazi Secret Warfare*, 146.

When Germany occupied a country, the Abwehr used a third type of information channel, akin to that employed within Germany. Since diplomacy no longer applied after invasion and occupation, and the 'legal' espionage apparatus associated with the use of attachés ceased to exist, the Abwehr simply constituted and attached an entire AST to the military district that the occupied territory had now become. It was arguably the only instance where the Abwehr co-opted the Nazi technique of forcible assimilation (*Gleichschaltung*) to absorb a newly acquired jurisdiction almost effortlessly into its intelligence-acquisition and counterintelligence systems. In this way, Belgium was covered by AST Belgien located in Brussels, and France by five ASTs under the control of the main Abwehr station in Paris (*Abwehrleitstelle* [ALST] Frankreich, known in everyday Abwehr parlance as 'Leit West').[50] Below the AST level, the choice of geographic location for substations was left to local initiative and was usually linked with the nature of the work in which each station specialised. In the case of Belgium, for example, NEST Boulogne was established by AST Belgien to carry out counterespionage operations along the Belgian coast, while AUST Antwerpen was moved from Brussels to Antwerp to facilitate the acquisition of naval intelligence on shipping in that major port. It was sometimes necessary to establish AUSTs or even smaller MKs (*Meldeköpfe* [reporting stations]) in such relatively remote centres as Hellenthal in the Eifel Mountains (to facilitate the insertion of Abwehr agents into the

50. If large occupied countries had more than one AST, then the ASTs were grouped together under a central ALST, which was responsible for Abwehr work in the country as a whole. France, for example, had five ASTs (Angers, Dijon, Lyons, Amiens, and Arras), all controlled by ALST Frankreich (Leit West) in Paris. See: MI5 manual, July 1944, Record Group 263, Entry ZZ17, Box 2, National Archives and Records Administration (NARA). See also: Matt Abicht, 'Abwehr Organisation', *Feldgrau.net* (4 December 2006-22 January 2007), http://www.feldgrau.net/forum/viewtopic.php?f=43&t=22970 (accessed 11 October 2015).

occupied Low Countries) or in small seaside resorts like Biarritz (to monitor Franco-Spanish border movements).

Many Abwehr units suddenly found themselves operating from non-urban bases in small towns or rural areas when Canaris found it necessary in 1944 to inject greater mobility into his organisation by creating field reconnaissance units in all theatres (similar to WALLI I, II, and III that operated throughout the war on the Russian front) capable of obtaining operational intelligence behind enemy lines. Early in the war, this reconnaissance role had been performed primarily (and highly successfully) by Abwehr II's special forces, the Brandenburgers and the Kurfürsters, camouflaged as 'special-purpose training regiments'.[51] However, as the war progressed, the former ceased to be special forces and were pressed into service as regular infantry-of-the-line, and the latter became a real rather than notional training formation. In preparation for the imminent Allied invasion of France, Canaris converted the stationary ASTs, NESTs, and AUSTs located in French cities into mobile units responsible for recruiting, training, and controlling staybehind agents to report on post-invasion Allied dispositions and movements. One can imagine the astonishment and displeasure of station personnel rudely ejected in May 1944 from their comfortable quarters in metropolitan Paris or Lyon and posted under army control to distant provincial towns and villages. No doubt such an unexpected exchange of familiar for unfamiliar operational space must have caused a significant deterioration of morale and effectiveness, especially among

51. In the early years of the Second World War, the elite Lehrregiment Brandenburg zbV 800 and the Lehrregiment Kurfürst zbV 1001 were essentially Canaris's commandos, most of whom were recruited from German ethnic communities in Eastern Europe. For further details, see: Dietrich F. Witzel, 'Kommandoverbände der Abwehr II im Zweiten Weltkrieg', *Militärgeschichtliches Beiheft zur Europäischen Wehrkunde*, no. 5 (October 1990).

officers. Though the administrative merger of the Abwehr and the SD took place at about the same time as the Normandy invasion, the 9,200 men of these new mobile front-reconnaissance units (*Frontaufklärungskommandos* [FAKs] and *Frontaufklärungstruppen* [FATs]) remained firmly under Wehrmacht control until the end of the year, by which time, with only four months of fighting left, their transfer to the RSHA was largely a paper manoeuvre.[52]

**Covert Space**

It is clear that Abwehr operations were affected by location and proxemics quite distinct from such fundamental Nazi concepts as *Lebensraum* (living space), *Großraumwirtschaft* (large-scale economic space), and *Entfernung* (distance), which are nevertheless all geographical concepts.[53] Intelligence networks define terrain and the practice of secret warfare. When the two can be seen to collide or smoothly intersect, historians can begin to identify preferred types of location which, due to a lack of visible front lines or arenas associated with 'secret' warfare, serve as effective covert space. Indeed, this is what distinguishes covert space from overt space, for the latter is occupied by naval, land, and air forces seeking to control an area manifestly. Consequently, unlike the Abwehr, the British intelligence and security services during the Second World War generally maintained an analogous distinction between so-called 'nonoperational' (i.e. covert) intelligence and 'operational' (i.e. overt, military) intelligence. While the latter was clearly predicated upon mobility (strategic and tactical advances and retreats), 'nonoperational' intelligence depended on static association with an

52. See: Kahn, *Hitler's Spies*, 248-250.

53. Dan Stone, 'Holocaust Spaces' in Paolo Giaccarcia and Claudio Minca, eds., *Hitler's Geographies: The Spatialities of the Third Reich* (Chicago: Chicago University Press, 2016), 47.

established space, usually a polity or geographic region.[54] No doubt with such precepts in mind, the wartime head of MI5, Sir David Petrie, wrote to the head of MI6, Stewart Menzies, on 17 April 1942 that 'the German espionage organization does not recognize our artificial divisions of a home and a foreign field, but operates without regard to geographical or other boundaries'.[55] In practice, however, the generally osmotic nature of covert space itself applies to both past and present intelligence organisations, British or not. Even so, only the intelligence operative — not the warrior — has the ability to move fluidly between overt and covert space, with the training and skills to reside in the latter, maintaining cover for long periods of time.

Such global mobility may be seen in the examples of Abwehr field agents Herbert Bahr and Erich Gimpel. The latter had been surveilling ships and their cargoes coming in and out of the port of Lima (Peru). When war broke out between the United States and Germany, Gimpel was interned by the Peruvians as an enemy alien and repatriated to Germany via America. A month after a fellow failed Abwehr agent, Herbert Bahr, had arrived in New York aboard the *SS Drottningholm*, Gimpel would be returned to Germany aboard the same ship, disembarking in Sweden and travelling by ferry and train back to Germany, where he arrived in Stettin on 1 August 1942. When Gimpel reached Berlin, he was ordered to report to Abwehr Tirpitzufer HQ, which was also home to the German Armed Forces cipher branch (OKW/Chi).[56] Gimpel was particularly skilled in radio communication and for this reason,

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54. Adrian O'Sullivan, *The Baghdad Set: Iraq through the Eyes of British Intelligence, 1941-45* (London/Cham: Palgrave Macmillan/Springer Nature, 2019), 136-138.

55. Petrie to Menzies (with attachment), 17 April, and reply 11 May 1942, KV 4/120, TNA, cited in Keith Jeffrey, *MI6: The History of the Secret Intelligence Service 1909-1949* (London: Bloomsbury, 2010), 487.

56. Erich Gimpel, *Agent 146: The True Story of a Nazi Spy in America* (New York: St Martin's Press, 2003), 21. This book was originally published as *Spion für Deutschland* (Munich: Süddeutscher, 1957).

under Operation ELSTER, he returned to America in 1944, where, he was arrested in New York.

Herbert Bahr, a citizen of the United States, had been arrested two years earlier in the same city that had once been his home. He had been approached by the head of the New York branch of the German Academic Exchange Service (DAAD), acting as an Abwehr recruiter. Bahr and several other male students of German origin were offered scholarships to study in Germany. FBI files reveal that Bahr left America in 1938 and studied for an engineering degree at the Institute of Technology in Hannover. It was here that he was formally recruited by the Abwehr, and on 18 February 1942 he crossed into neutral Switzerland over the historic wooden bridge between Säckingen (Baden) and Stein (Aargau). Once in Switzerland, Bahr assumed the cover identity of a German-Jewish refugee and booked himself passage aboard the *SS Drottningholm*, which he boarded in Lisbon, and on which he then travelled to America.[57] On 3 July 1942, he was arrested and taken from the ship to the New York Field Division of the FBI, where he was questioned for ten days. The game was finally up, when, on 8 July 1942, Herbert Bahr admitted to being a German spy.[58] Despite his arrest and the failure of his mission, the public and transitory nature of the ship and its transatlantic voyage provided Bahr, as a globetrotting German intelligence operative, with the required anonymity to undertake his operation. The ship had served as an effective covert space — a space that enabled Bahr and Gimpel to journey extreme distances while operating under the cover of secrecy. Likewise, the cityscape of New York could potentially provide Abwehr operatives like Bahr and Gimpel with the ideal urban space in which to carry

57. FBI case files: Herbert Karl Friedrich Bahr, Record Group 65, Entry A1 136Z, Box 25, Location 230 86/11/06, ARC Identifier 6135928, NARA.

58. Ibid.

out covert missions, gathering important information on US war industry (local aircraft factories, shipbuilding yards, and arms manufacturing).[59]

Such exploitation of covert space assumed a more assertive form when the Nazis occupied a foreign city or town. In Occupied France, for example, it was their custom to requisition all major hotels and restaurants for military use, along with many other large public buildings, such as blocks of flats, schools, theatres, cinemas, casinos, sports stadia, garages, hospitals, and prisons, not to mention brothels, industrial infrastructure, and land. By denying access to such guarded spaces, it became easier for the occupiers to administer curfew regulations, to prevent crowds from assembling in public, or to concentrate targeted groups (for example, Jews to be transported) deliberately at controlled points. Local residents had nowhere to go, especially after dark, except to their own homes or perhaps to church, because most public spaces and places had been forcibly incorporated by the occupiers into their secret world, as part of their covert landscape. The manifest, practical reason for such requisitions was to ensure that German forces were adequately housed and fed, with a minimum amount of contact or fraternisation with enemy civilians. A large hotel was considered to be superior to any other kind of building as a military or intelligence headquarters, for it essentially provided executive and operational staff with a prefabricated, fully furnished, self-contained, secure space, complete with its own large number of multipurpose suites and bedrooms, assembly areas (lounges, dining rooms, ballrooms, meeting rooms, etc), kitchens, cellars, attics, offices, servants' quarters, telephone

59. The head of RSHA VI, Walter Schellenberg, cited the Abwehr's intelligence failures in the United States in a speech advocating for a Nazified, politically led, unified intelligence and information service. See: Katrin Paehler, *The Third Reich's Intelligence Services: The Career of Walter Schellenberg* (Cambridge: Cambridge University Press, 2017), 173.

switchboard, vehicle access and parking, sanitation systems, running water, heating, and even in some cases power generators. In other words, to use the Nazi parlance, a hotel could be more wholly and rapidly sealed off and *gleichgeschaltet* (assimilated) by occupying forces than any other type of public space. However, requisitioning and occupying such prominent establishments came with an obvious risk: major hotels and restaurants became easy targets for resistance fighters.[60]

Concerning other occupied countries, it is perhaps arguable whether the Nazis definitively 'occupied' Vienna when they forcibly converted Austria into the German province of Ostmark in 1938; however, the Austrian *Anschluss* (annexation) involved the application of many of the techniques of Nazi military occupation, including the confiscation of major Austrian hotels, especially those owned by Jews, and their use for military and police purposes, including secret operations. Meanwhile, across Occupied Europe hundreds, possibly thousands, of large and small establishments were requisitioned, many serving as headquarters for Abwehr III counterintelligence operations, which sometimes even included the torture and murder of enemy captives, especially when Abw III was complicit in interrogations conducted by RSHA IV (Gestapo). These premises and the widespread distribution of units and staff among such spaces are significant because they demonstrate the decentralised nature of the Abwehr organisation. The covert landscape it occupied was anything but monolithic, and during the war years it became progressively more fragmented and consequently more dysfunctional.

With regard to Abwehr activity in neutral countries, the interaction between military-intelligence personnel and civilian social environments certainly deserves more intense

60. Gregory Ashworth argues that the city should be avoided as a battle terrain. See: Gregory J. Ashworth, *War and the City* (London: Routledge, 1991).

historiographical scrutiny than it has hitherto received.[61] For example, hotels located within a neutral city served a very different purpose to those requisitioned during Nazi occupation. Hotels, restaurants, casinos, parks, and pleasure grounds provided intelligence operatives with anonymity in a public space. A hotel in particular 'erased the presence of those who passed through it, completing a functional work that other kinds of spaces could not'.[62] Before America joined the war, the FBI was keen to identify hotels in New York City where German intelligence cells had been reported. An FBI report dated 3 December 1940 includes a long list of hotels with their full addresses, from the Gladstone Hotel at 114 East 52nd Street to the Rex Hotel at 106 West 47th Street. Other buildings of a public nature such as the Metropole Sporting Club at 209 West 48th Street were also listed.[63] Such sites served as 'sites of sociability'[64] where spy encounters and interaction with civilians took place in urban buildings where private and public boundaries overlapped, resulting in the functional conceptualisation of covert space. A similar function can be attributed to the safe-house, which offered Abwehr operatives a place of sanctuary — space which the prying eyes of the

61. See the authors' recent work on 'spy wives', which offers the first survey of women married to secret agents: Claire Hubbard-Hall and Adrian O'Sullivan, 'Wives of Secret Agents: Spyscapes of the Second World War and Female Agency', *International Journal of Military History and Historiography* 39, (2019), 181-207.

62. Friedman, *Covert Capital,* 242.

63. FBI files on the Abwehr, Record Group 65, Entry A1 136P, Box 122, Location 230 86/08/02, ARC Identifier 6133657, NARA.

64. Matt Houlbrook's study of queer spaces in London and how modern urban culture generated 'spaces of sociability' is of particular relevance to urban spy activity and the construction of 'covert space'. See: Matt Houlbrook, *Queer London: Perils and Pleasures in the Sexual Metropolis, 1918-1957* (Chicago: University of Chicago Press, 2005).

spycatcher could not reach. In this way 'space is transformed symbolically into a place, that is, a space with a history',[65] raising interesting questions about the boundaries of secrecy and its sister privacy within such covert spaces.[66]

To define such boundaries within the landscape of clandestine operations, it is useful to undertake a comparative analysis of urban and rural functions and conditions in times of war or peace. It is, for instance, a curious misconception that, to best evade detection and capture, fugitive spies (or criminals for that matter) should escape the city and seek out remote hideaways in mountains, forests, or deserts; in solitary caves and ruins; or in small villages and rural towns. For, apart from removing espionage operatives from their normal targets and networks, it is precisely here that the slightest behavioural error, the smallest of sociocultural false moves, may and probably will betray the intruder and destroy his or her cover, no matter how carefully contrived and documented. While it may require a large professional counterespionage team to detect and neutralise a spy operating in the urban or suburban environment, it takes but one amateur observer to spot an interloper in a rural location and deconstruct in a flash an elaborately conceived cover on the basis of cultural nuances too subtle for the non-native to comprehend or simulate.

Such was the case in Iraqi Kurdistan in 1943 when, due to a navigational error, the parachutists of Abwehr II's Operation MAMMUT were dropped by the Luftwaffe special-purposes squadron some 200 km off-target into an agricultural community near Mosul instead of over the Zagros foothills between Erbil and Rowanduz. Though the Germans were attired in authentic, hand-sewn Kurdish costumes, these were suitable for wear only in the

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65. Paul Carter, *The Road to Botany Bay: An Essay in Spatial History* (London: Faber and Faber, 1987), 647.

66. See the work of David Vincent: *The Culture of Secrecy: Britain 1832-1998* (Oxford: Oxford University Press, 1998); *Privacy: A Short History* (Cambridge: Polity, 2016).

tribal region of their intended dropzone. Once spotted by observant villagers, the conspicuous intruders were reported to the local police, who lost no time in rounding them up and handing them over to British security intelligence.[67]

In very different circumstances in rural Persia, a fugitive Abwehr I M (naval-intelligence) operative named Konstantin Jakob unwisely sought to evade capture by hiding among the deserted ruins of the ancient city of Persepolis. It took merely one casual visitor, not even a local — a solitary, sightseeing British artillery officer on leave from his unit, with no intelligence connections or expertise — to spot Jakob amidst the ruins and quickly conclude after a brief conversation that he was probably a German spy engaged in tribal subversion. Luckily for Jakob, young Captain Maufe failed to report his discovery to the British security authorities, so he was able to remain free for two more years, thanks largely to the connivance of local tribesmen who had come to value the German's engineering know-how and mechanical skills. However, had he instead hidden somewhere in the urban sprawl of nearby Shiraz, Jakob's presence might have gone entirely unnoticed until the Allied occupation was over. After all, he had lived in Persia since before the war, had many contacts, and spoke fluent Farsi.[68]

The message is therefore clear for operatives seeking the preservation of their cover and relative anonymity: there is indeed safety in numbers. This partly explains why so many espionage cases are played out against an urban or suburban backdrop, and why so many factual spies are urban sophisticates, though not normally as exaggeratedly urbane and suave as the notional Agent 007 and other literary stereotypes. Yet what it does not so readily

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67. For sources on Operation MAMMUT, see the extensive bibliographical note in: O'Sullivan, *Nazi Secret Warfare*, 211n4.

68. Ibid., 148-149, 163; Private Papers of Lieutenant G G Maufe MC, 15520, Imperial War Museum (IWM).

explain is how the dynamics of counterintelligence and security-intelligence operations are affected by spatial factors. Which extreme search environment favours the spycatchers: the heaving metropolis or the empty desert? The answer lies in the paradoxical truth that, while spycatching operations are essentially intended to protect and defend against espionage by pre-empting it, the spycatcher's role is basically offensive: search and capture. Conversely, although spies are generally thought of as attacking their enemies aggressively, they are so often fugitive — especially in wartime — that they are usually compelled to adopt a defensive posture and mentality in order to survive operationally. Thus the second clear message they receive is that a needle is less easily found in a haystack than in a clear expanse. And so most defensively-minded operatives are wisely reluctant to break their deep urban cover in a dash for open country, thereby abandoning the city's advantages: their precious anonymity, their heightened sense of security, their familiar communication channels, their safe-houses, their dead drops, their cutouts, and their 'joes'. But, to roughly the same degree, their pursuers are equally urban creatures, usually beholden to a large administrative headquarters and infrastructure based at or near to a centre of government or military affairs and reliant upon geographically defined resources of manpower and technology. In fact, the security officer is powerfully adapted to operate offensively within the very urban spaces preferred by the spy. And so the odds are even, the relatively level urban playing field defines itself, and the game of identity, anonymity, and wits is played out without necessarily favouring either offence or defence.

**The End of the War**

As the war progressed and the Wehrmacht retreated on all fronts, especially from 1943 onwards, the covert landscape gradually contracted, operational resources dwindled, and the agent talent-pool slowly evaporated with a concomitant deterioration in the quality of agents.

In mid-1944, the space for which the Abwehr was responsible shrank suddenly when, on Hitler's direct orders, the SD relieved it of many of its obligations or assimilated them into the newly created yet moribund Militärisches Amt (Military Office) under Walter Schellenberg. As the Allies approached the borders of Greater Germany, long-range operations were no longer required, networks collapsed, sources became unreliable or unproductive, and recruitment needs were greatly reduced. Above all, expectations diminished. Enforced role changes and different alien spaces had an effect on the morale of Abwehr personnel, especially as the creative culture of autonomy and initiative that Canaris actively encouraged was gradually eroded. We certainly know that morale ebbed as the war situation deteriorated, not only in the Abwehr but also in the SD. In fact, the Abwehr became ever more paralytic and unproductive; many of its NESTs and AUSTs ultimately became completely disconnected from the line of command and did little work. How much of this dysfunction was caused by louche living in the fleshpots of large cities remains a matter of speculation, which intelligence historians could perhaps address by adopting some of the investigative methods used by social historians.

Wilhelm Kuebart, who transferred from FHO to become head of Abwehr I H (army intelligence) after his spell at Angerburg, was certainly appalled at the decline of his branch of the service. As early as November 1943, he visited Paul Leverkuehn's KO in Istanbul and found great disarray: 'everything being run by completely haphazard methods'. The outstations were worse: many officers were totally unqualified, had little sense of duty and honour, were leading an easy existence, and were sleeping with the station secretaries, 'which lowered their prestige and posed an obvious security risk'.[69] In January 1945, after four years

69. Appendix 8 (b), Interim report on the case of Wilhelm Kuebart, Camp 020, August 1945, KV 2/410, TNA, quoted in: O'Sullivan, *Nazi Secret Warfare*, 46-47.

in Persia, Berthold Schulze-Holthus of Abwehr I L (air-force intelligence) returned to Vienna station (now rebranded under SD control as a 'command report area' (Kommando des Meldegebietes [KdM] Wien). There he found morale extremely low and the staff 'drifting abandoned and rudderless in the absence of any clear remit'.[70] With the Red Army already encircling the city, such catastrophic loss of purpose is understandable; however, it would be interesting to know whether the ultimate collapse of this highly independent Abwehr station was ensured much earlier by the 'corrupting' influence on its staff of the Austrian capital, known for its sophistication, its delights, its criminal underworld, and its lingering legacy of leftist politics among the Viennese working class. As Germany retreated and the operational landscape contracted, military intelligence gradually lost its significance and ultimately dwindled to a mere trickle. Even when acquired and evaluated, it would have fallen upon the by now stone-deaf ears of a Führer who had long since ceased to believe whatever reports Walter Schellenberg offered him, no matter how soundly based or how distorted to suit Hitler's taste.

## Conclusion

<FIGURE 6 ABOUT HERE (CHH_AOS_Landscapes_JIH_Fig6.tiff)>

Figure 6. Static visualisation (small-scale map) of the Caucasus-Nile pincer movement (see p. 8 above) contemplated by the Nazis, to secure oil supply and to annihilate the Jews of Palestine, derived from Hitler's War Directive No. 32 of 11 June 1941 and various Abwehr and RSHA VI records. With GIS, the information content of this visualisation could be significantly increased, for example by the use of (1) *multilayering* to depict gradual systolic/diastolic phases of warfare and the associated failure to realise strategic

70. Extract from US Forces in Austria detailed interrogation report, 31 October 1945, KV 3/195, TNA, quoted in: O'Sullivan, *Nazi Secret Warfare*, 42.

preconditions; (2) *animation* to show strategic movements; (3) *hover-and-click popups* to embed detailed descriptive data within symbolised markers (such as derricks [oil regions] and insignia [troop formations]); (4) *zooming* to generate larger-scale polygons (so-called breakout submaps) or supplementary charts; and (5) *searchability* of hidden data. Source: Adrian O'Sullivan, 'Neglected Narratives of Nazi Subversion', *Journal of the Iran Society* 2, no. 16 (September 2017), 8.

This article has attempted to use a textual realisation of certain cases selected from the Abwehr's operational history to demonstrate that accounts of events that occur in time may be significantly enhanced if also visualised as occurring in space, not just metaphorically but concretely, within a broad, changing geospatial landscape of intelligence. One might therefore conclude with some justification that the limited set of descriptive, narrative, and analytical tools used here is adequate for visualising the systolic and diastolic phases of covert warfare even within the context of as dynamic and diversified an organisation as the Abwehr or as geospatially extensive a conflict as the Second World War. Yet, if one were to embed one's visualisation in a dynamic electronic interface rather than in a static printed document, it would be possible to enhance communication further by introducing such elements as graphic plasticity and interactivity (see Figure 6). In an educational context, of course, such vivification of otherwise dry quantitative data could prove hugely motivational, especially among the young (not necessarily the very young), whose appetite for graphic learning material, preferably animated, is insatiable. Most intelligence historians (unlike military historians, who do love their maps) rely on the communicative power of the written word to showcase their work, to the exclusion of even simple, static cartography. Even when writing about large intelligence services like the Abwehr, they seem content to produce entirely verbal, text-based studies which depict, unlike this article, temporal sequences rather than geospatial landscapes. However, new interdisciplinary methodological approaches (and robust GIS software) are currently available that should encourage scholars to no longer see

time and space as oppositional concepts, but to use space as an alternative prismatic lens through which they may view, describe, and analyse entire landscapes of intelligence. In the case of printed publications (monographs or journal articles), such visualisations can of course be achieved by words alone, without graphic support. However, as was pointed out earlier in this article, intelligence historians also now have at their disposal an entire interpretive and analytical technology — historical geographic information systems (HGIS) — whose powerful arrays of relatively intuitive tools go far beyond mere illustration.[71]

Surely, as we enter the third decade of the 21st century, these tools should be considered as potential routine constituents of intelligence scholarship and historiography, especially whenever there is a need to integrate quantitative geohistorical data with qualitative historical sources — and even more so whenever opportunities exist to disseminate scholarly or educational contributions in a dynamic online iteration, as well as (or even instead of) in the conventional form of a static printed output.[72] When dealing with the secret world, scholars need all the help they can get: HGIS offers intelligence historians

71. Unfortunately, because GIS is a desktop or web-based technology, it is not possible to provide effective graphic examples of HGIS implementation in this article, for of necessity they feature such interactive, user-controlled modalities as panning, zooming, markers linked with loaded data, pop-up windows, and dynamic layers, which can only be viewed and manipulated on the computer screen, and none of which can be replicated on the printed page. The simplest way to see HGIS in action, is to visit the German Historical Institute (GHI) of Paris website, where one can find a comprehensive study of the military occupation of France (in French and German): 'Frankreich unter deutscher Besatzung 1940–1945: Die deutschen und französischen Dienststellen', *Deutsches Historisches Institut Paris (Institut Historique Allemand)*, http://www.adresses-france-occupee.fr/de.

72. See: Gregory and Ell, *Historical GIS*, 199, 204, who wrote in 2007, 'We believe that if the opportunities currently on offer are taken, then GIS will become an essential part of historical research in future.' So far as intelligence history is concerned, in 2020 it is difficult to justify their optimism.

the opportunity to lift the veil that obscures that world and to unlock past vistas, spyscapes, and complex cultures of secrecy.

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